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EXAMINER

KIM, WESLEY LEO

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/502,220	Applicant(s) SANCHEZ FERRERAS ET AL.	
	Examiner WESLEY L. KIM	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Amendment filed on 11/10/08.
 - Claims 15 and 17 are currently amended.
 - Claims 2-17 are pending.
 - This Action is made FINAL.

Response to Arguments

2. Applicant's arguments with respect to claims 2-17 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 17 is rejected under 35 U.S.C. 102(b) as being anticipated by Coyne et al (US 5943619).

Regarding Claim 17, Coyne teaches contracted service module (Fig.3:40, MSC/VLR) operable to provide contracted advanced services to a mobile subscriber unit traveling in a foreign network (Col.6:lines 49-60 and Col.8:lines 23-26 and Col.8:lines 40-46) with reference to identifying data and features data regarding the contracted advanced services provided by the foreign network (Col.6:lines 49-60), the contracted advanced services being services that are not provided for in general

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mobile telephony standards but which are contracted for by the mobile subscriber unit in the home network (Col.1:lines 29-34 and Col.5:lines 46-47), the home network (Fig.3:10A) and the foreign network (Fig.3:10B) being part of a plurality of mobile telephone networks interconnected through a gateway (Fig.3:250, PE and Col.5:lines 39-42, protocol enhancer) arranged to provide communication with the mobile subscriber unit accessing the foreign network (Col.6:lines 36-60, PE provides communication with the mobile subscriber unit accessing the foreign network) and to transmit signaling parameters between the foreign network and the home network as part of general telephony operation (Col.6:lines 25-60, transmits signals from the foreign network to the home network), said signaling parameters including an indication of the mobile subscriber unit entering and exiting the foreign network (Col.6:lines 25-31, HLR updates location based on signals), data regarding the foreign network and data regarding the mobile subscriber unit (Col.6:lines 25-31), the home network including a first data storage unit operable to store an indication that the mobile subscriber unit is present in the foreign network based on the signaling parameters (Col.6:lines 25-31, HLR) and the contracted service module (Col.5:lines 56-67, the MSC/VLR, i.e. the contracted service module, sends the signal to the home network so based on the signals and the MSC/VLR, the HLR detects that the mobile unit is in a foreign network), the contracted service module comprising:

a second data storage unit (Col.6:lines 45-55, VLR) operable to store identifying data for identifying the mobile subscriber unit traveling in a foreign

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network (Col.5:lines 46-49, the VLR of the MSC/VLR maintains the location of the mobile unit in a foreign network upon registration) and features data regarding contracted advanced services provided by the foreign network (Col.6:lines 45-55, VLR stores features provided in the foreign network in a register, i.e. VLR); and a contracted service unit (Col.6:line 55, subscriber feature application modules) operable to provide the contracted advanced services to the mobile subscriber unit traveling in the foreign network in real time (Col.6:line 55, subscriber feature application modules provide service when need, i.e. call barring at the time of call) by referring only to the identifying data (i.e. stored subscriber data) stored in the second data storage unit (i.e. VLR) to determine the location of the mobile subscriber unit and by referring to the features data stored in the second data storage unit to determine whether the mobile subscriber unit is capable of receiving the contracted advanced services in the foreign network (Col.6:lines 49-60 and Col.8:lines 40-46, the subscriber feature application modules within the MSC/VLR utilize the stored subscriber data, i.e. location and features, to provide available subscriber features to the roaming mobile station).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 2-5, 8, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coyne et al (US 5943619) in view of Alperovich et al (US 5960356).

Regarding Claim 15, Coyne teaches a system for tracking a mobile telephone subscriber unit traveling between a home network of the mobile subscriber unit and a foreign network to enable provision, as contracted advanced services, services that are not provided for in general mobile telephony standards but which are contracted for by said subscriber unit in the home network (Col.1:lines 30-34 and Col.5:line 36-Col.6:line 60 and Col.8:lines 40-46), when said subscriber unit is in the foreign network (Col.5:line 46-49), and for storing information indicative thereof (Col.6:lines 47-55, subscriber information is stored), the home network and the foreign network being part of a plurality of mobile telephone networks interconnected through a gateway (Fig.3, a base station (i.e. the gateway) provides the connection from the mobile station 30 to the MSC/VLR of foreign network 10B to home network 10A), said gateway being arranged to provide communication with the mobile subscriber unit accessing the foreign network (Fig.3: connection between MS 30 and the foreign network 10B) and to provide, as part of the normal operation of the networks, for the transmission of signaling parameters between the foreign network and the home network (Col.5:lines 46-49 and Col.6:lines 25-60, transmits indication that mobile is in the foreign network from the foreign network to the home network), said signaling parameters including an indication of the mobile subscriber unit entering the foreign network (Col.5:lines 46-49), as well as data regarding the foreign network (i.e. PE) and data regarding the mobile subscriber unit (i.e. IMSI)

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(Col.6:lines 25-31, PE and IMSI), the home network including a first data storage unit operative to store an indication that said mobile subscriber unit is in the foreign network in response to said signaling parameters (Col.6:lines 25-31), the system comprising: a data processing unit connected between the gateway and the home network (Fig.3:40, MSC/VLR has a processor); a data analysis unit coupled to the data processing unit (Fig.3:40, MSC/VLR has software for analysis); a second data storage unit connected between the gateway and the home network and coupled to the data processing unit (Fig.3:40, VLR); and; said data processing unit being operative to detect, on the basis of information transmitted through the gateway (i.e. base station), the signaling parameters including the indication of entrance of the mobile subscriber unit in and from the respective foreign network (Col.5:lines 46-49, mobile station registers with foreign network, via a base station, therefore the MSC/VLR knows when the mobile station enters the foreign network), the data regarding the foreign network (Col.5:lines 64-67, address of the PE) and the data regarding the mobile subscriber unit (Col.5:lines 64-67, IMSI), and operative to separate and send the detected signaling parameters to the data analysis unit (Fig.3:40, MSC/VLR, any data received and processed will be analyzed by a processor); the data analysis unit being operative to identify the mobile subscriber unit of the associated home network entering a foreign network (Col.5:lines 46-49, mobile station registers with foreign network therefore the MSC/VLR knows when the mobile station enters the foreign network), and to generate identifying data that identify the mobile subscriber unit located in the foreign network, and operative to

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provide the identifying data generated thereby to the second data storage unit
(Col.5:lines 46-49, the VLR of the MSC/VLR maintains the location of the mobile unit in a foreign network upon registration);

a second data storage unit (Col.6:lines 45-55, register of MSC/VLR) operable to store identifying data for identifying the mobile subscriber unit traveling in a foreign network (Col.5:lines 46-49, the register of the MSC/VLR maintains the location of the mobile unit in a foreign network upon registration) and features data regarding contracted advanced services provided by the foreign network (Col.6:lines 45-55, VLR stores features provided in the foreign network in a register, i.e. VLR);

and a contracted service module (Fig.3:40, MSC/VLR) operable to provide the contracted advanced services to the mobile subscriber unit traveling in the foreign network in real time (Col.8:lines 23-26) by referring only to the identifying data (i.e. stored subscriber data) stored in the second data storage unit (i.e. VLR) to determine the location of the mobile subscriber unit and by referring to the features data stored in the second data storage unit to determine whether the mobile subscriber unit is capable of receiving the contracted advanced services in the foreign network (Col.6:lines 49-60 and Col.8:lines 40-46, the MSC/VLR utilize the stored subscriber data, i.e. location and features, to provide available subscriber features to the roaming mobile station), however **Coyne does not expressly teach** that the said signaling parameters include an indication of the mobile subscriber unit exiting the foreign network.

Alperovich teaches that signaling parameters include an indication of the mobile subscriber entering and exiting a network (Col.5:lines 42-64) for purposes of updating the location at the HLR of the home network (Col.3:lines 39-47) and the location information is stored at the MSC/VLR (Col.5:lines 42-64). Alperovich further supports the examiners statement that the mobile station communication with a network via a base station (Fig.6:210).

Therefore, would have been obvious to modify Coyne with Alperovich at the time of the invention to provide accurate call routing to the location of the mobile station so that quality of service is not reduced while the mobile station roams.

Regarding Claim 2, From Coyne, it is obvious the data analysis unit connected to the contracted service module is operative to inform said contracted service module every time the data analysis unit detects an entrance/exit of a subscriber unit in a foreign network (Coyne: Col.6:line 49-60, MSC/VLR provides the service, i.e. call barring to the user when the call is made, so the analysis unit, i.e. software, has to inform the MSC/VLR that the mobile unit is in the network), in order to enable the contracted service module to provide said contracted advanced services in real time to the subscriber unit in the foreign network, without having to make prior consultations (Coyne: Col.6:line 55, MSC/VLR provide the service, i.e. call barring to the user when the call is made, i.e. real-time).

Regarding Claims 3 and 8, Coyne teaches an event-based service module (Col.6:line 55, feature application modules which provides features); therefore it is obvious that there is an event generator connected to the event-based service

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module (Col.6:lines 55-58, modules provide features to users so event/features are generated) and operable to generate at a timing of the event generator a contracted advanced service for the subscriber unit located in the foreign network (Col.6:lines 55-58 and Col.1:lines 30-34, i.e. call barring), the event-based service module accessing the second data storage unit to obtain the identifying data in order to provide the contracted advanced service to the subscriber unit (Col.6:lines 55-58, utilizes the stored data at the VLR).

Regarding Claim 4, Coyne teaches the second data storage unit is arranged to contain data regarding features of each foreign network (Col.6:lines 49-60, the MSC/VLR stores data features of the foreign network), such that the system is operable to determine which network different received data belong to, and to adapt the contracted advanced services to the features of the foreign network in which the subscriber unit is located (Col.8:lines 40-46).

Regarding Claim 5, Coyne and Alperovich teaches the data analysis unit is arranged so that when entrance of the subscriber unit into a foreign network is detected (Coyne: Col.5:lines 46-49), said data analysis unit registers that the subscriber unit has entered into the foreign network, and causes this information to be stored in the second data storage unit (Coyne: Col.6:lines 49-55, a register of MSC/VLR stores subscriber data), and Alperovich further teaches the current subscriber location to be updated (Col.5:lines 42-64, the location is stored in a register of the MSC/VLR, upon location update) and communicated to the contracted service module (Coyne: Col.6:lines 49-55, MSC/VLR stores subscriber data).

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7. Claims 6-7 and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coyne et al (US 5943619) and Alperovich et al (US 5960356) in further view of Nilsson (WO 01/10109 A2).

Regarding Claims 7 and 9-14, Coyne and Alperovich teach all the limitations as recited in claims 15, 2-6, and 8, respectively, however **the combination does not expressly teach** the storage means are arranged to store a log of all the visits made by each subscriber to the foreign networks.

Nilsson teaches an HLR maintaining a record of all subscribers of the home network (Pg.4:lines 22-24). It is obvious that a log of a subscriber in a foreign network is kept. It is a well known concept that one HLR/VLR can access subscriber information from another HLR/VLR so it is obvious that the storage means containing a log of visits made by each subscriber to the foreign network.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Coyne and Alperovich with Nilsson, such that storage means are arranged to store a log of all the visits made by each subscriber to the foreign networks, to provide a method of accessing information that is already available to process calls more quickly in the event that the user roams back into the area at a later time of day.

Regarding Claim 6, Coyne and Alperovich teach all the limitations as recited in claim 2, respectively, and Alperovich teaches the analysis means are arranged so that when said analysis means detect an exit of a subscriber from a foreign network (Col.5:lines 42-64, MSC/VLR) however **the combination does not expressly teach**

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the analysis means verify whether notification has been received that the subscriber has entered into another foreign network, the analysis means further being arranged so that: if the result of the verification is affirmative, the analysis means consider that the subscriber has entered into another foreign network, storing this information and updating the current subscriber location in the storage means, and communicating this to the real time service module; whereas if the result of the verification is negative, the analysis means consult the home network to verify whether the subscriber has again entered the home network, and if an affirmative response is obtained, the analysis means eliminate the corresponding entry in the storage means and report this to the real time service module.

Nilsson teaches that an HLR maintains a record of all the subscribers of the home network (Pg.4, i.e. directory number, current location, profile information) and to one of ordinary skill in the art, it is obvious that if a subscriber roams out of the home region then the HLR's analysis means (i.e. CPU) determines if a subscriber has roamed into a foreign network. If a subscriber has roamed into a foreign network the analysis means will receive an affirmation from the VLR of the visited system however if the subscriber cannot be found (i.e. the subscriber got on a plane and turned off the phone) the analysis means will receive no affirmation (i.e. a negative verification.) so therefore the HLR will check all possible locations where the phone may be, (i.e. home network). If the user is found the HLR will update its records (Pg.5:4-22) to keep an accurate record of all the subscribers of the home network (Pg.4:21-24). Therefore, it would have been obvious to one of ordinary skill in the art

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at the time of the invention to modify Coyne and Alperovich with Nilsson, to effectively monitor the location of the mobile station so that services can be provided to the mobile station so that quality of service is not reduced while the mobile station roams.

8. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Coyne et al (US 5943619) and Alperovich et al (US 5960356) in further view of Rosenberg et al (US 2003/0013434 A1).

Regarding Claim 16, Coyne and Alperovich teaches all the limitations as recited in claim 15, however **the combination does not expressly teach** the advanced services include a news service comprising providing news content to the mobile subscriber unit.

Rosenburg teaches that mobile stations that are roaming can be provided with advance contracted services such as news and weather (Par.19 and Par.4).

To one of ordinary skill in the art, it would have been obvious to modify the combination of Coyne and Alperovich with Rosenberg such that the advanced services include a news service comprising providing news content to the mobile subscriber unit, to provide a method where a plurality of contracted services may be provided to the user as they are roaming so that users may be provided with the best quality of service possible.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WESLEY L. KIM whose telephone number is (571)272-7867. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, George Eng can be reached on 571-272-7495. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George Eng/
Supervisory Patent Examiner, Art Unit 2617

/Wesley L Kim/
Examiner, Art Unit 2617